United States Patent [19]

Slingsby

[11] **4,334,126**

[45] **Jun. 8, 1982**

[54] **CONTROL CIRCUIT FOR CONCURRENTLY MONITORING AND CONTROLLING FUNCTIONS AND FREQUENCY MODULATING STATUS INFORMATION IN A DIGITAL DATA NETWORK**

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[21] Appl. No.: **120,570**

[22] Filed: **Feb. 11, 1980**

[51] **Int. Cl.**[3] **H04Q 5/18**

[52] **U.S. Cl.** ..... **179/18 ES**; 179/99 M; 364/900

[58] **Field of Search** ..... 179/18 ES, 18 AD, 18 J, 179/99 M, 99 P, 99 R, 84 R, 1.5 FS; 364/900 MS File

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[57] **ABSTRACT**

A remote unit contains function circuits to be controlled in response to control data from a central location and function circuits to generate information for transfer to the central location. The control data is transferred between the remote unit and the central location as frequency-shift-keyed signals. In the remote unit, a programmed microcomputer contains three blocks of instructions for enabling the microcomputer to perform background operations, to respond to the initial receipt of a message, and to thereafter transmit and decode the message. Further, in response to the decoding block of instructions, that are provided on a fixed time basis, the microcomputer is able to transmit frequency-shift-keyed signals without the need for a separate frequency-shift-keyed transmitter.

11 Claims, 74 Drawing Figures